

AMENDMENTS TO THE CLAIMS UNDER REVISED 37 C.F.R. § 1.121

Please cancel claims 13-42 and 46-58 without prejudice to their refiling in future divisional or continuation applications. Please amend the claims as follows:

1. (Currently amended) An isolated nucleic acid molecule comprising ~~a nucleotide sequence selected from the group consisting of:~~

(a) the nucleotide sequence as set forth in ~~any of~~ SEQ ID NO: 1, ~~SEQ ID NO: 4, SEQ ID NO: 6, SEQ ID NO: 9, SEQ ID NO: 11, SEQ ID NO: 14, SEQ ID NO: 16, SEQ ID NO: 19, or SEQ ID NO: 22;~~

(b) a nucleotide sequence encoding the polypeptide as set forth in ~~any of~~ SEQ ID NO: 2, ~~or SEQ ID NO: 3, SEQ ID NO: 5, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 10, SEQ ID NO: 12, SEQ ID NO: 13, SEQ ID NO: 15, SEQ ID NO: 17, SEQ ID NO: 18, SEQ ID NO: 20, SEQ ID NO: 21, or SEQ ID NO: 23;~~

(c) a nucleotide sequence ~~which~~ that hybridizes to the complement of the nucleotide sequence of either (a) or (b) at 50°C in a hybridization buffer comprising 0.015 M sodium chloride and 0.0015 M sodium citrate; under moderately or highly stringent conditions to the complement of either (a) or (b); and/or

(d) a nucleotide sequence that is complementary to either any one of (a) or (b).

2. (Currently amended) An isolated nucleic acid molecule comprising ~~a nucleotide sequence selected from the group consisting of:~~

~~—— (a) —— a nucleotide sequence encoding a polypeptide which is at least about 70 percent identical to the polypeptide as set forth in any of SEQ ID NO: 2, SEQ ID NO: 3, SEQ ID NO: 5, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 10, SEQ ID NO: 12, SEQ ID NO: 13, SEQ ID NO: 15, SEQ ID NO: 17, SEQ ID NO: 18, SEQ ID NO: 20, SEQ ID NO: 21, or SEQ ID NO: 23, wherein the encoded polypeptide has an activity of the polypeptide set forth in any of SEQ ID NO: 2, SEQ ID NO: 3, SEQ ID NO: 5, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 10, SEQ ID NO: 12, SEQ ID NO: 13, SEQ ID NO: 15, SEQ ID NO: 17, SEQ ID NO: 18, SEQ ID NO: 20, SEQ ID NO: 21, or SEQ ID NO: 23;~~

~~—— (b) —— a nucleotide sequence encoding an allelic variant or splice variant of the nucleotide sequence as set forth in any of SEQ ID NO: 1, SEQ ID NO: 4, SEQ ID NO: 6, SEQ ID NO: 9, SEQ ID NO: 11, SEQ ID NO: 14, SEQ ID NO: 16, SEQ ID NO: 19, or SEQ ID NO: 22, or (a);~~

~~(ea) a region of the nucleotide sequence of any of SEQ ID NO: 1, SEQ ID NO: 4, SEQ ID NO: 6, SEQ ID NO: 9, SEQ ID NO: 11, SEQ ID NO: 14, SEQ ID NO: 16, SEQ ID NO: 19, or SEQ ID NO: 22, (a), or (b) encoding a polypeptide fragment of at least about 25 amino acid residues, wherein the polypeptide fragment has an activity of the encoded polypeptide as set forth in any of SEQ ID NO: 2, SEQ ID NO: 3, SEQ ID NO: 5, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 10, SEQ ID NO: 12, SEQ ID NO: 13, SEQ ID NO: 15, SEQ ID NO: 17, SEQ ID NO: 18, SEQ ID NO: 20, SEQ ID NO: 21, or SEQ ID NO: 23, or is antigenic;~~

~~(db) a region of the nucleotide sequence of any of SEQ ID NO: 1, SEQ ID NO: 4, SEQ ID NO: 6, SEQ ID NO: 9, SEQ ID NO: 11, SEQ ID NO: 14, SEQ ID NO: 16, SEQ ID NO: 19, or SEQ ID NO: 22, or any of (a) – (e) comprising a fragment of at least about 16 nucleotides;~~

~~(ec) a nucleotide sequence which that hybridizes to the complement of the nucleotide sequence of either (a) or (b) at 50°C in a hybridization buffer comprising 0.015 M sodium chloride and 0.0015 M sodium citrate; under moderately or highly stringent conditions to the complement of any of (a) – (d); and/or~~

~~(fd) a nucleotide sequence complementary to any of (a) - (dc).~~

3. (Currently amended) An isolated nucleic acid molecule ~~comprising a nucleotide sequence selected from the group consisting of:~~

(a) a nucleotide sequence encoding a polypeptide as set forth in ~~any of~~ SEQ ID NO: 2, or SEQ ID NO: 3, ~~SEQ ID NO: 5, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 10, SEQ ID NO: 12, SEQ ID NO: 13, SEQ ID NO: 15, SEQ ID NO: 17, SEQ ID NO: 18, SEQ ID NO: 20, SEQ ID NO: 21, or SEQ ID NO: 23~~ with at least one conservative amino acid substitution, wherein the encoded polypeptide ~~has an activity of~~ is at least 70 percent identical to the polypeptide set forth in ~~any of~~ SEQ ID NO: 2, ~~or~~ SEQ ID NO: 3, ~~SEQ ID NO: 5, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 10, SEQ ID NO: 12, SEQ ID NO: 13, SEQ ID NO: 15, SEQ ID NO: 17, SEQ ID NO: 18, SEQ ID NO: 20, SEQ ID NO: 21, or SEQ ID NO: 23;~~

~~—— (b) —— a nucleotide sequence encoding a polypeptide as set forth in any of SEQ ID NO: 2, SEQ ID NO: 3, SEQ ID NO: 5, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 10, SEQ ID NO: 12, SEQ ID NO: 13, SEQ ID NO: 15, SEQ ID NO: 17, SEQ ID NO: 18, SEQ ID NO: 20, SEQ ID NO: 21, or SEQ ID NO: 23 with at least one amino acid insertion, wherein the encoded polypeptide has an activity of the polypeptide set forth in any of SEQ ID NO: 2, SEQ ID NO: 3, SEQ ID NO: 5, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 10, SEQ ID NO: 12, SEQ ID NO: 13, SEQ ID NO: 15, SEQ ID NO: 17, SEQ ID NO: 18, SEQ ID NO: 20, SEQ ID NO: 21, or SEQ ID NO: 23;~~

~~—— (c) —— a nucleotide sequence encoding a polypeptide as set forth in any of SEQ ID NO: 2, SEQ ID NO: 3, SEQ ID NO: 5, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 10, SEQ ID NO: 12, SEQ ID NO: 13, SEQ ID NO: 15, SEQ ID NO: 17, SEQ ID NO: 18, SEQ ID NO: 20, SEQ ID NO: 21, or SEQ ID NO: 23 with at least one amino acid deletion, wherein the encoded polypeptide has an activity of the polypeptide set forth in any of SEQ ID NO: 2, SEQ ID NO: 3, SEQ ID NO: 5, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 10, SEQ ID NO: 12, SEQ ID NO: 13, SEQ ID NO: 15, SEQ ID NO: 17, SEQ ID NO: 18, SEQ ID NO: 20, SEQ ID NO: 21, or SEQ ID NO: 23;~~

~~(db) a nucleotide sequence encoding a polypeptide as set forth in any of SEQ ID NO: 2, or SEQ ID NO: 3, SEQ ID NO: 5, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 10, SEQ ID NO: 12, SEQ ID NO: 13, SEQ ID NO: 15, SEQ ID NO: 17, SEQ ID NO: 18, SEQ ID NO: 20, SEQ ID NO: 21, or SEQ ID NO: 23 which has a C- and/or N- terminal truncation, wherein the encoded polypeptide comprises at least 25 amino acid residueshas an activity of the polypeptide set forth in any of SEQ ID NO: 2, SEQ ID NO: 3, SEQ ID NO: 5, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 10, SEQ ID NO: 12, SEQ ID NO: 13, SEQ ID NO: 15, SEQ ID NO: 17, SEQ ID NO: 18, SEQ ID NO: 20, SEQ ID NO: 21, or SEQ ID NO: 23;~~

~~(ec) a nucleotide sequence encoding a polypeptide as set forth in any of SEQ ID NO: 2, or SEQ ID NO: 3, SEQ ID NO: 5, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 10, SEQ ID NO: 12, SEQ ID NO: 13, SEQ ID NO: 15, SEQ ID NO: 17, SEQ ID NO: 18, SEQ ID NO: 20, SEQ ID NO: 21, or SEQ ID NO: 23 with at least one modification selected from the group consisting of conservative amino acid substitutions, amino acid insertions, amino acid deletions, C-terminal truncation, and N-terminal truncation, wherein the encoded polypeptide is at least 70% identical to the polypeptide set forth in SEQ ID NO: 2 or SEQ ID NO: 3 and comprises at least 25 amino acid residueshas an activity of the polypeptide set forth in any of SEQ ID NO: 2, SEQ ID NO: 3, SEQ ID~~

~~NO: 5, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 10, SEQ ID NO: 12, SEQ ID NO: 13, SEQ ID NO: 15, SEQ ID NO: 17, SEQ ID NO: 18, SEQ ID NO: 20, SEQ ID NO: 21, or SEQ ID NO: 23;~~

(fd) a nucleotide sequence of any of (a) - (ec) comprising a fragment of at least about 16 nucleotides;

(ge) a nucleotide sequence ~~which~~ that hybridizes to the complement of the nucleotide sequence of any one of (a) - (d) at 50°C in a hybridization buffer comprising 0.015 M sodium chloride and 0.0015 M sodium citrate; under moderately or highly stringent conditions to the complement of any of (a) - (f); and/or

(hf) a nucleotide sequence that is complementary to any of (a) - (e).

4. (Currently Amended) A vector comprising the nucleic acid molecule of any of Claims 1(a) - 1(c), 2(a) - 2(c), or 3(a) - (e).

5. (Original) A host cell comprising the vector of Claim 4.

6. (Original) The host cell of Claim 5 that is a eukaryotic cell.

7. (Original) The host cell of Claim 5 that is a prokaryotic cell.

8. (Original) A process of producing an LGR8 polypeptide comprising culturing the host cell of Claim 5 under suitable conditions to express the polypeptide, and optionally isolating the polypeptide from the culture.

9. (Original) A polypeptide produced by the process of Claim 8.

10. (Original) The process of Claim 8, wherein the nucleic acid molecule comprises promoter DNA other than the promoter DNA for the native LGR8 polypeptide operatively linked to the DNA encoding the LGR8 polypeptide.

11. (Original) The isolated nucleic acid molecule according to Claim 2, wherein the percent identity is determined using a computer program selected from the group consisting of GAP, BLASTN, FASTA, BLASTA, BLASTX, BestFit, and the Smith-Waterman algorithm.

12. (Original) A process for determining whether a compound inhibits LGR8 polypeptide activity or LGR8 polypeptide production comprising exposing a cell according to any of Claims 5, 6, or 7 to the compound and measuring LGR8 polypeptide activity or LGR8 polypeptide production in said cell.

13-42. (Cancelled)

43. (Original) A composition comprising a nucleic acid molecule of any of Claims 1, 2, or 3 and a pharmaceutically acceptable formulation agent.

44. (Original) The composition of Claim 43, wherein said nucleic acid molecule is contained in a viral vector.

45. (Original) A viral vector comprising a nucleic acid molecule of any of Claims 1, 2, or 3.

46-58. (Cancelled)